





DIVISION OF OIL & GAS DEPARTMENT OF ENERGY



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Date			10/	15/8	6		•
Oper Well			Cro	ouch	#23-	<u>-A</u>	***
Farm	1						-
API	No.	47	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	109		0991	-

WELL OPERATOR'S REPORT

OF

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			STIMULATING,	OB	PHYSICAL C	THATACH.
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IL TYPE: Oil / Gas X / Liquid Injection (If "Gas," Production X / Underground				low_x/)
Watershed Will	Branch o	f Clear Fo	rk	
OCATION: Elevation: 1465 Nate: Material Minimum 1465 Nate:	ng (wadrangle	Oceana 7	. 5
		,		
OMPANY Peake Operating Company 423 Charleston National Plaza DDRFSS Charleston, WV 25301	Caging	Used in	i é	Cement fill up Cu. ft.
ESIGNATED AGENT Timothy K. Wilcox	Tubing	Drilling	in Well	Cu. Ic.
DDRESS Same	Size 20-16	AT-		
NIRFACE OWNER E. H. Crouch Heirs	Cond.			
ADDRESS General Delivery, Oceana, WV	13-10"	21	21 *	2 sks
MINERAL RIGHTS OWNER Same	9 5/8	408	40813	140 sks
ADDRESS	8 5/8			
OIL AND GAS INSPECTOR FOR THIS WORK Arthur	7	1347	1347	150 sks
St. Clair ADDRESS Brenton, WV	5 1/2			213 sks.
PERMIT ISSUED 4/23/86	4 1/2		6027	90 sks.
DRILLING COMMENCED 6/10/86	3			
DRILLING COMPLETED 6/22/86	2			
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON	Liners used			feet
GEOLOGICAL TARGET FORMATION Devonian Shales		De De	-1 - Mools	
such as applied well 6045' feet	Rotary_	<u>x</u> / Cal	ote imra	1
Water strata depth: Fresh None 1886, Coal seam depths: 170 430	Is coa	al being m	ined in t	ne area: No
			. (4120	4728
OPEN FLOW DATA Producing formation Devonian Shales Gas: Initial open flow 10 Mcf/d	0:1.	Tnitial O	en flow	Bbl/d
Gas: Initial open flow 10 Mcf/d Final open flow 73 Mcf/d	· • • • • • • • • • • • • • • • • • • •	Final ope	n flow	Bbl/c
Final open flow (73) MCI/O	k Tulan mend	I final te	sts 7	hours
Time of open flow between in	ncrar ar	mantl a	fter 64	hours shut i
Time of open flow between In Static rock pressure 480 psig(surf	ace meas	Telero, a		•
(If applicable due to multiple complete	ion/			
a		_pay zone	man flow	**************************************
McF/	y Orr:	Initial	reir riow	
MCT/	U ULLi			The state of the s
	mitial at	A THOT A		
Static rock pressurepsig(surf	ace meas	rement, a	i i	n reverse si
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				17 198

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHÝSICAL CHANCE, ETC.

9/15/86 - Dowell dumped 1000 gal. 7% acid. McCullough perforated the Devonian Shale at
5055', 5100', 5125', 5162', 5209', 5459', 5539', 5572', 5604', 5611', 5628',
5047', 5658', 5660', 5672'.

Dowell fraced using 75 Q Foam, 60,000# 20/50 sand, 263 bbl. total fluid,
816,000 SCFN2. ATR - 44 bbl/min. down hole, BDP 2300#, ATP 3000#, ISIP 1800#,
efter 15 min. SIP 1600'.

McCullough perforated top zone in Devonian Shale at 4130', 4414', 4424', 4448',
McCullough perforated top zone in Devonian Shale at 4130', 4715', 4728'. Set N-1
4452', 4507', 4540', 4620', 4661', 4663', 4665', 4697', 4715', 4728'. Set N-1
frac plug at 4770'.
Dowell fraced using 75 Q Foam, 1000 gal. 7% acid, 15,000# 80/100 sand, 45,000#
20/50 sand, 548,000 SCFN2, 208 bbl. total fluid. ATR - 28 bbl/min. (down hole),
BDP 2300#, ATP 1950#, ISIP 1400#, 15 min. SIP 1350#.

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale Shale Sand Shale Sand & Shale Ravencliff Sand Avis Lime Shale Sand Shale Sand Shale Sand Shale Lime Shale Big Lime Shale Shale Sand & Shale Shale Shale Shale Shale Shale Shale Shale Shale Berea Sand Shale Shale Shale Onondaga Lime	0 1350 1448 1520 1560 1610 1650 1690 1720 1790 2010 2090 2273 2310 2365 2450 2490 2870 3010 3118 3472 3504 3640 3657 6020	1350 1448 1520 1560 1610 1650 1690 1720 1790 2010 2090 2273 2310 2365 2450 2490 2870 3010 3118 3472 3504 3640 3657 6020 TD	Gas checks: 1525085 1600158 1677163 2200146 2350094 2500083 2650100 2900084 3450103 3525103 3680103 4660082 5150088 5575087 TD103
6045 3504 2547-049)-139.			

(Attach separate sheets as necessary)

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Peake Operating Company	
Well operator	
By: Tilleebles	
Data 10-15-86	
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Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including detail, encountered in the drilling of a well."

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DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

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State of West Wirginiu DEPARTMENT OF ENERGY

wieluid and Una Pivision

Date	June 2, 19	87
Operator	is .	
Well No.	Crouch #23	-A
Farm	Crouch	*
API No.	47. – 109	-0991- Revised
		E

WELL OPERATOR'S REPORT

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

The state of the s	MILLI DIAICH	of Clear F	OLK	
District: Clear Fork County W	yoming	Quadrangle	Ocean	a /.5
CAMPANY Peake Operating Company				
OMPANY Peake Operating Company 423 Charleston National Plaza Charleston, WV 25301	Casing	Used in	Teft	Cenent
DESIGNATED AGENT' Timothy K. Wilcox	Tubing	Drilling		fill up Cu. Et.
NDDRESS Same	Size			
SURFACE CWNER E. H. Crouch Heirs	20-16			-
MDDRESS General Delivery, Oceana, WV	Coixl	21	21	2 sks.
MINERAL RIGHIS OWNER Same	9 5/8	408	408	140 sks.
NDDRESS	8 5/8			
OIL AND GAS INSPECTOR FOR THIS WORK Arthur	7	1347	1347	150 sks.
St. Clair ADDRESS Brenton, WV	5 1/2			
PERMIT ISSUED 4/23/86 / 4-24-87	4 1/2		.6027	213 sks. 90 sks.
DRILLING COMMENCED 6/10/86 / 5-19-87	3	·		
DRILLING COMPLETED 6/22/86 / 5-26-87	2			
IF APPLICABLE: PLUGGING OF DRY HOLE ON				
CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED	Liners			_
ON_				<u>.</u>
GEOLOGICAL TARGET FORMATION De	vonian Shale	es De	pth 3	,500 fee
Depth of campleted well 6045 fee	t Rotary_	X / Cab	le Tools_	
Water strata depth: Fresh None fee	t; Salt_1	TOTIC ~~	•	
Water strata depth: Fresh None fee		d being mi		ne area? <u>No</u>
Coal seam depths: 170, 430				ne area? <u>No</u>
Coal seam depths: 170, 430 OPEN FLOW DATA	Is coa	d being mi	ned in th	
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton	Is coa	d being mi	pth 1480	-1495 fee
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/	Is coa	l being mi Pay zone de Unitial ope	pth 1480- n flow	-1495 fee Bbl,
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/	Is coally do oil:	d being mi Pay zone de Unitial open	pth 1480- n flow	-1495 fee Bbl,
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/ Time of open flow between	Is coally do oil: 1 do oil	l being mi Pay zone de Unitial open Final open Final test	pth 1480- n flow flow 4	-1495 fee Bbl, Bbl,
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/ Time of open flow between Static rock pressure 440 psig(su	Is coally do oil: 1 do oil	l being mi Pay zone de Unitial open Final open Final test	pth 1480- n flow flow 4	-1495 fee Bbl, Bbl,
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/ Time of open flow between Static rock pressure 440 psig(sw.) (If applicable due to multiple comple	Is coally down on the coal of	d being mi Pay zone de Unitial open Final open final test rement) aff	pth 1480- en flow flow es 4 pter 72 h	-1495 fee Bbl Bbl hours ours shut
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf, Final open flow 1,283 Mcf, Time of open flow between Static rock pressure 440 psig(sw.) (If applicable due to multiple comple Second producing formation	Is coald to the second	Pay zone de Enitial open final test rement) aft	pth 1480- en flow flow cs 4 1 cer 72 he	-1495 fee Bbl, Bbl, hours ours shut
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/ Time of open flow between Static rock pressure 440 psig (sw. (If applicable due to multiple comple Second producing formation Gas: Initial open flow Mcf	Is coally down on the coal of	Pay zone de Enitial open final test rement) aff	pth 1480- n flow flow cer 72 he	-1495 fee Bbl, Bbl, hours ours shut fe
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/ Time of open flow between Static rock pressure 440 psig(sw (If applicable due to multiple comple Second producing formation Gas: Initial open flow Mcf Final open flow Mcf	Is coally down on the coal of	Pay zone de Enitial open final test rement) affinal open Pay zone de Initial open Final open	pth 1480- en flow flow cer 72 he epth en flow flow flow flow	-1495 fee Bbl. Bbl. hours ours shut fe Bbl. Bbl.
Coal seam depths: 170, 430 OPEN FLOW DATA Producing formation Princeton Gas: Initial open flow 84 Mcf/ Final open flow 1,283 Mcf/ Time of open flow between Static rock pressure 440 psig(sw/ (If applicable due to multiple comple Second producing formation Gas: Initial open flow Mcf	Is coally down to the coal of	Pay zone de Unitial open final open final test Pay zone de Initial open Final open final open final open	pth 1480- en flow flow cer 72 he epth en flow flow flow the flow t	-1495 fee Bbl. Bbl. hours ours shut fe Bbl. Bbl.

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 5/19/87 Isolate Devonian Shales with a Baker Model T Bridge plug at 1690'. Perforate 3 squeeze holes at 1550'. Squeeze with 8 bbls. RFC.
- 5/21/87 Drilled cement to ± 1516 '. Perforate $1\underline{480-1495}$ with 32 holes.
- 5/26/87 75 Q Foam Frac Princeton. Used 500 gal. 15% HCL, 60,000# 20/50, 215 bbls. H₂O, 420,000 SCFN₂, BDP 2850#, ATP 2450#, ISIP 2050#, after 15 min. 1875#.

WELL LOG

FORMATION' COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale Shale Sand Shale Sand & Shale Ravencliff Sand Avis Lime Shale Sand Shale Sand Shale Sand Shale & Sand Shale Lime Shale Big Lime Shale Band & Shale Onondaga Lime	0 1350 1448 1520 1560 1610 1650 1690 1720 1790 2010 2090 2273 2310 2365 2450 2490 2870 3010 3118 3472 3504 3640 3657 6020	1350 1448 1520 1560 1610 1650 1690 1720 1790 2010 2090 2273 2310 2365 2450 2490 2870 3010 3118 3472 3504 3640 3657 6020 TD	Gas checks: 1525085 1600158 1677163 2200146 2350094 2500083 2650100 2900084 3450103 3525103 3630103 4660082 5150088 5575087 TD103
			DTD - 6045 LTD - 6045 JUN 0 3 1987 DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

PEAKE OPERATING COMPANY

Well Operator

By:

Company

Date:

6-2-87

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including that, encountered in the drilling of a well."

Deep		+					A CONTRACTOR OF THE PARTY OF TH		April 2	•	86
Well No. 27 109-0891 APR 1973 STATE OF WEST VIRGINIA PRINCIPATION OF CHEMPARTMENT OF ENERGY, OIL AND GAS DIVISION APPLICATION FOR A WELL WORK PERMIT OFFICIATION FOR A WELL WORK PERMIT DELICITY FOR COUNTY, WORKING TO COUNTY, WORK TO COUNTY, WORKING TO COUNTY, WORKING TO COUNTY, WORKING TO COU	ORM WW-2(B)	FILE	COPY.	THE PARTY		`. 	COT WEST OF THE SECOND	,		μοο Λ	, 11
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PROPOSED WELL WORK PROJECTION BY A PER CONTRIVION FOR A WELL WORK PERMIT WELL TYPE: A OII		APF	1 = 1 13	igo AAS		STATE O	F WEST VIRO	INIA			
New LityPie Cigar Production Deep Shallow X	Sales All	35 . 	NOF OIL	L & DHP	ÂKTME	NT OF EN	ERGY, OIL AI	ND GAS DIVI	SION		
WELLTYPE: A Oil) 0	EPARTA	NENT OF		APP	LICATION I	FOR A WELL V	VORK PERMIT			
District: Clear Fork County: Worlding Oundrangle: Ocean 7, 5 WELLOPERATOR Peake Operating Cocode: 37100 7) DESIGNATED ACRES TIMOTHY K. WI LOX Address 423 Charleston National Plaza Charleston, WV 25301 OIL & GOS INSPECTOR TO BE NOTIFIED Name Arthur St. Clair St. Clair Address P. O. Box 157 Add		E: A O	il	/ Ga Production	s <u>X</u>	/	nderground stor	age	/ Deep		X /)
WELL OPERATOR PEAKE OPERATING COCODE: 37100 7 DESIGNATED AGENT TIMOTHY K. WILLOW Address 423 Charleston National Plaza Charleston, W 25301 9 DRILLING CONTRACTOR: Name Arthur St. Clair Name Arthur St. Clair Name Address P. O. Rox 157 Address P. Perforate new formation Prince On Prescribed Prince Of Prescribed New York Prince On Prescribed New York Prince Of Prince Of Prescribed New York Prince Of Prescribed New York Prince Of Prince O	5) LOCATION					# 1 PS	i di				
Address 423 Charleston National Plaza Charleston, WZ 25301 OIL & GAS INSPECTOR TO BE NOTIFIED Name Arthur St. Clair Name Address P. O. Box 157 Address P. O.	6) WELLOPE			7 7 7				DESIGNATE	AGENT Timoth	/ K. Wilco	X
OIL & GAS INSPECTOR TO BE NOTIFIED Name Arthur St. Clair Address P. O. BOX 157 Address P. O. BOX 157 Brenton, WV 24818 PROPOSED WELL WORK: Drill X Drill deeper Redrill Simulate X Piug off old formation Well (specify) OEOLOGICAL TARGET FORMATION. Selection of the physical change in well (specify) GEOLOGICAL TARGET FORMATION. Selection of the physical change in well (specify) GEOLOGICAL TARGET FORMATION. Selection of the physical change in well (specify) OASING AND TUBING PROGRAM ASING OR GREAT STRILLING PROGRAM ASING OR GREAT STRILLING PROGRAM Solve Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Since Great Pert New Uses I See drilling Left in well (specify) Drill LLING PERMIT April 23 19 86 Date OFFICE USE ONLY Drill and Great See Conditions contained herein and on the reverse hereof Nollification must be given to the Disrict Oil and Great Inspector (specify) and Great I See Conditions on Conditions See Conditions Contained herein and on the reverse hereof No	•	_423	3 Charl	eston	Natio	<u>nal Plaz</u>			423 Charlest	<u>ton Nation</u>	al Plaza
Name Arthur, St., Clair Name Address Brenton, MV 24818 PROPOSED WELL WORK: Drill X Drill deeper Redrill Stimulate X Plays off old formation. Other physical change in well (specify) GEOLOGICAL TARGET FORMATION, Stimulate deeper Redrill Stimulate Address 12) Estimated depth of completed well, 5980 feet 13) Approximate trait depths: Fresh, 150 feet; salt, 500 feet. 14) Approximate coal seam depths: None Is coal being mined in the area? Yes No X CASING AND TUBING PROGRAM FOOTAGE INTERVALS FOOTAG	8) OIL & GAS					<u> </u>	9)	DRILLING C	ONTRACTOR:		
PROPOSED WELL WORK: Drill X	-,			_				NameU	nknown		·
PROPOSED WELL WORK: Drill X Drill deeper Redrill Stimulate X	Address							Address			
Pilog off old formation Perforate new formation Other physical change in well (specify) (SEOLOGICAL TARGET FORMATION) Perforate new formation Other physical change in well (specify) (SE stimated depth of completed well, 5280 feet salt, 500 feet; salt, 500 feet; salt Soal being mined in the area? Yes No X (CASING AND TUBING PROGRAM PORTIONS SPECIFICATIONS SECTIFICATIONS SECTIF		Bre	enton,							v	
Other physical change in well (specify) 12) Estimated depth of completed well, 5980 feet; salt, 500 feet; sal	10) PROPOSE	D WELL Y	WORK:				•		Jiiiiuiate	^	
GEOLOGICAL TARGET FORMATION, 5980 feet 5980 feet 13) Approximate trata depths: Fresh, 150 feet; salt, 500 feet. 14) Approximate coal seam depths: None Is coal being mined in the area? Yes. No X SACKS ORDITION TYPE Stree Crede Perfect Alone Struke Street Crede Perfect Alone Street Street Street Street Street Crede Perfect Street Crede Perfect Street Crede Perfect Street S				-				new formation			٠.
12) Estimated depth of completed well, 5980 feet sall, 500 feet, 150 feet; sall, 500 feet. 14) Approximate trait adopths: Fresh, 150 feet; sall, 500 feet. 14) Approximate coal seam depths: None Is coal being mined in the area? Yes. No X CASING AND TUBING PROGRAM FOOTAGE INTERVALS For drilling For drilling For drilling Latt in well CASING AND TUBING PROGRAM SEECHTCATION For drilling Latt in well CASING AND TUBING PROGRAM FOOTAGE INTERVALS COMMENT FILLIP PACKERS COMMENT FILLIP COMMENT FI	III GEOLOGI	CAT TAD	CET FOR	•	·			onian S	SHALF 44		
13) Approximate trata depths: Fresh, 150 feet; salt, 500 feet. 14) Approximate coal seam depths: None is coal being mined in the area? Yes No X OASING AND TUBING PROGRAM CANNO OR 12 SPECHICATIONS CHING TYPE Size Grade perfit. New Used Foodstall in Left in well OR SACKS (Cabic Itea) SPECHICATIONS 12 SPECHICATIONS FOOdstall Item No. 12 37 H-40 42 X 30 30 30 Kinds seth water 9 5/8H-40 36 X 350 350 CTS Neat salt Intendistr 7 J-55 17 X 1300 1300 150 sacks RULE IS.O. Todoction 4 1/2 J-55 10.5 X 5900 300 sacks as DREQG by rule 15.0 Debta 14 1/2 J-55 10.5 X 5900 300 sacks as DREQG by rule 15.0 Debta 15 SACKS RULE IS.O. OFFICE USE ONLY DRILLING PERMIT April 23 19 86 Debta 16 Section 19 Sec	•					80					
Approximate coal seam depths: Italia Itali		-			15	0	feet; salt,	500	feet.		V
CHING OF TYPE Size Grade Per ft. New Used For drilling Left in well Cable feet Cab	14) Approx	ximate coa	l seam dept	ths:	No	ne	Is coal b	eing mined in th	e area? Yes	/ No	_X/
NUMNG TYPE Size Grade per ft. New Used For drilling Left in well (Cable feet) onductor 12 3/4 H-40 42 X 30 30 30	15) CASING A	ND TUBI	NG PROC	GRAM						z.	
Top Bottom OFFICE USE ONLY DRILLING PERMIT April 23 19 86 Date OFFICE USE ONLY Driverent to covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal redifferents subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to 8.8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall motify the proper stricted and agas inspector 24 hours before actual permitted work has commenced.) Description of the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall motify the proper strict oil and gas inspector 24 hours before actual permitted work has commenced.) Description of the construction of roads, locations and pits for any permitted work has commenced.) Description of the construction of roads, locations, and pits for any permitted work in addition, the well operator or his contractor shall motify the proper stricted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the werse hereof. Partil 23, 1988 unless well work is commenced prior to that date and prosecuted with due diligence. Bond: Agent: Plat: Casing Fee WPCP See Other Alternative Division of 5 bits and 6 bits on 5 b	CASING OR TUBING TYPE	Size	1	Weight	1 8	Used I	1		OR SACKS	PACKE	RS
OFFICE USE ONLY DRILLING PERMIT April 23 19 86 Date Airinethis subject to the construction of roads, locations and printited work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the verse hereof. April 23, 1988 Bond: Agent: Plat: Casing Fee WPCP S&E Other January Agent	Conductor	12 3/4	4H-40	42	Χ		30	30		Kinds	
OFFICE USE ONLY DRILLING PERMIT April 23 19 86 Date this permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal redirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector, (Refer to a.8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper strict oil and gas inspector 24 hours before actual permitted work has commenced.) The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the verse hereof. April 23, 1988 Unless well work is commenced prior to that date and prosecuted with due diligence. Bond: Agent: Plat: Casing Fee WPCP S&E Other April 23, 1988 WPCP S&E Other April 24 and Application.	Fresh water	9 5/8	<u>\$Н-40</u>	36	_X	3	50	350	CTS Neat		
OFFICE USE ONLY DRILLING PERMIT April 23 19 86 Date his permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal recipiements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to all 9) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper strict oil and gas inspector 24 hours before actual permitted work has commenced.) Bond: Agent: Plat: Casing Fee WPCP S&E Other April 23, 1988 WPCP S&E Other Agent: Plat: Casing Fee WPCP S&E Other April 23, 1988 WPCP S&E Other	Coal	 						1200	150		
OFFICE USE ONLY DRILLING PERMIT April 23 19 86 Date his permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal re- difference of the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper strict oil and gas inspector 24 hours before actual permitted work has commenced.) he permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the verse hereof. Ermit expires April 23, 1988 unless well work is commenced prior to that date and prosecuted with due diligénce. Bond: Agent: Plat: Casing Fee WPCP S&E Other The April 23 and The April 23 and The April 24 and The April 25 and The April 25 and The April 26 and The April 27 and The April 27 and The April 27 and The April 27 and The April 28 and The April 28 and The April 29 and The April 20 and The April	Intermediate	1 1 / 2	7	1	X	_13	00		7)		
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	NOTE: Keep o	ne copy o	f this perm	nit posted	at the dri	ling location	· (/bir	ector, bi	vision of /bil	and Gas	File
See the reverse side of the APPLICANT'S COPY for instructions to the well operator.			See	the revers	e side of	the APPLIC	ANT'S COPY I	or instructions t	o the well operator.		

FORM	WW-2(B) F	JE C	QPX.		The state of the s
(Obve	ense)					
7,05		APR	02	198	1	IJ



1)	Date:	March 3	31, 19	87
2)	Operator's Well No	Crouch	#23-A	

3) API Well No. 47 - 109 - 0991 - Frac.
State County Permit

STATE OF WEST VIRGINIA

DIVISION OF	OIL & GAS DEPAR	RTMENT OF ENERGY, OIL	AND GAS DIVISION
DEPARTMENT	OF ENERGY	APPLICATION FOR A WELL	L WORK PERMIT

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4) WELL T	YPE: A Oil		/ Gas		X /	i Inderground st	orage	_/ Deep	/ Shallow X	<u> </u>	
	B (li	"Gas", Pation:	roduction 141	551	1	Watershed:	Mill Creek	of Clear Fork	ζ		
5) LOCATI					4		Wyoming 10	Q Quadrangle:	Oceana / .5	5/	
4) WEILO	PERATOR P	eake (perat	ing (<u>Co</u> ĆODE:	37100 7) DESIGNATED	AGENT Timothy 423 Charlesto	Nation:	1 Plaza	
6) WELL O	423	Charle	ston	Natio	onal Pl	aza	Address			11 11020	
71441	Char	lestor	, WV	2530	L fails			Charleston, V	NV 23301		
s) OIL&C						9) DRILLING CO	NTRACTOR:			
	OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR: Name Arthur St. Clair Name Unknown										
	Address P. O. Box 157 Address										
	Brei	nton,	JV 24	818_					v .		
IO) PROPO	SED WELL V	VORK:	Drill		/ Drill	deeper	/ Redrill	/ Stimulate	Δ/		
20) 221010							te new formation_	/			
			Other pl			well (specify)	· al. De				
11) GEOLO	GICAL TAR	GET FOR	MATION		-Devon		N Cliff	1 " \			
12) Esti	imated depth o	f complete	ed well,		-5980-	g .	500	•			
13) App	proximate trat	a depths:	Fresh,		150	feet; salt,		feet.	/ No	X ,	
	proximate coal				None	Is coa	il being mined in the	area? Yes	/ 140	/	
15) CASING	G AND TUBI	ng proc	GRAM					V contract villin	PACKE	·pc	
CASING OR		SPEC	IFICATIONS	3		FOOTAGE II	1	CEMENT FILL-UP OR SACKS	I ACK		
TUBING TYPI	Size	Grade	per ft.	New	Used	For drilling	Left in well	(Cubic feet)	****	Name of the last o	
Conductor	12-3/4	H-40	42	_X_		30	30	CTC Noot	Kinds		
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Coal				ļ		7.000	1200	150 sks. Ru	<u> </u>		
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Permit numb	oer <u>47-</u>	<u> 109-09</u>	<u>91-Fra</u>	LC.				Da			
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The nermitte	ed work is as o	described i	n the Not	ice and	Applicatio	n, plat, and reclan	nation plan, subject	to any modifications	and conditions s	specified on the	
reverse here	of :							ed prior to that date and			
Permit expir	es April	24,	LYOY	,		unless we	ii work is commence	ou prior to that date and	a prosecutor was		
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Bond:	Agen	t:	Plat:	Cas	ing	Fee WPCF	SAE	Other	7 /	`	
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MOTE: "	eep one copy (of this per	mit poster	lat the	drilling loa	cation. r	irector, Di	vision of Oil	and Gas	File	
NUIE: K	eep one copy (or mis ber	mir posici			1	TIECTOR'S DE	.vauaum ua uaa		rne	